Applicant: Shunpei Yamazaki et al.

Serial No.: 10/753,524 Filed: January 9, 2004

Page : 2 of 10

## Amendments to the Claims

This listing of claims replaces all prior versions and listings of claims in the application.

Attorney's Docket No.: 07977-218003 / US3531/3615D1D1

## Listing of Claims

1-20. (Canceled)

21. (Currently Amended) A personal computer comprising:

a semiconductor film provided over a substrate and comprising a source region, a drain region and a channel formation region provided between said source region and said drain region; and

a gate electrode provided adjacent to said channel formation region with a gate insulating film therebetween,

wherein said semiconductor film comprises a first crystal region, a second crystal region and a grain boundary located between the first crystal region and the second crystal region.

wherein a first lattice image corresponding to the first crystal region has a first direction different from a second direction of a second lattice image corresponding to the second crystal region, and

wherein lattices are continuously connected to each other at [a] <u>said</u> grain boundary of said semiconductor film.

- 22. (Previously Presented) A computer according to claim 21 further comprising an auxiliary capacitance.
  - 23. (Previously Presented) A computer according to claim 21 further comprising: a pixel electrode; an opposite electrode; and

 Applicant : Shunpei Yamazaki et al.
 Attorney's Docket No.: 07977 

 Serial No. : 10/753.524
 218003 / US3531/3615D1D1

Serial No.: 10/753,524 Filed: January 9, 2004

Page : 3 of 10

a liquid crystal provided between said pixel electrode and said opposite electrode.

24. (Canceled)

25. (Previously Presented) A computer according to claim 21 wherein channel length of said channel formation region is 2 µm or shorter.

26-41. (Canceled)

- 42. (Previously Presented) A computer according to claim 21 wherein direction of movement of a carrier in said channel formation region coincides with direction of extension of said grain boundary.
- 43. (Previously Presented) A computer according to claim 21 wherein the semiconductor film comprises silicon.
- 44. (Previously Presented) A computer according to claim 21 wherein the semiconductor film comprises a rod-shaped crystal.
- 45. (Previously Presented) A computer according to claim 21 wherein the semiconductor film comprises a flattened rod-shaped crystal.
- 46. (Previously Presented) A computer according to claim 23 wherein the pixel electrode comprises ITO.
  - 47. (Currently Amended) A personal computer comprising:

 Applicant : Shunpei Yamazaki et al.
 Attorney's Docket No.: 07977 

 Serial No. : 10/753,524
 218003 / US3531/3615D1D1

Serial No.: 10/753,524 Filed: January 9, 2004

Page : 4 of 10

a semiconductor film provided over a substrate and comprising a source region, a drain region and a channel formation region provided between said source region and said drain region; and

a gate electrode provided adjacent to said channel formation region with a gate insulating film therebetween, and

a thermal oxidation film provided between the semiconductor film and the gate electrode, wherein said semiconductor film comprises a first crystal region, a second crystal region and a grain boundary located between the first crystal region and the second crystal region.

wherein a first lattice image corresponding to the first crystal region has a first direction different from a second direction of a second lattice image corresponding to the second crystal region, and

wherein lattices are continuously connected to each other at [[a]] said grain boundary of said semiconductor film.

- 48. (Previously Presented) A computer according to claim 47 further comprising an auxiliary capacitance.
  - 49. (Previously Presented) A computer according to claim 47 further comprising: a pixel electrode;

an opposite electrode; and

- a liquid crystal provided between said pixel electrode and said opposite electrode.
- 50. (Previously Presented) A computer according to claim 47 wherein channel length of said channel formation region is 2 µm or shorter.
- 51. (Previously Presented) A computer according to claim 47 wherein direction of movement of a carrier in said channel formation region coincides with direction of extension of said grain boundary.

 Applicant
 Shunpei Yamazaki et al.
 Attorney's Docket No.: 07977-218003 / US3531/3615D1D1

Serial No.: 10/753,524
Filed: January 9, 2004

Page : 5 of 10

52. (Previously Presented) A computer according to claim 47 wherein the semiconductor film comprises silicon.

- 53. (Previously Presented) A computer according to claim 47 wherein the semiconductor film comprises a rod-shaped crystal.
- 54. (Previously Presented) A computer according to claim 47 wherein the semiconductor film comprises a flattened rod-shaped crystal.
- 55. (Previously Presented) A computer according to claim 49 wherein the pixel electrode comprises ITO.
  - 56. (Currently Amended) A personal computer comprising:

a semiconductor film provided over a substrate and comprising a source region, a drain region, a channel formation region provided between said source region and said drain region, and a low concentration impurity region provided between the channel formation region and at least one of the source region and the drain region; and

a gate electrode provided adjacent to said channel formation region with a gate insulating film therebetween,

wherein said semiconductor film comprises a first crystal region, a second crystal region and a grain boundary located between the first crystal region and the second crystal region,

wherein a first lattice image corresponding to the first crystal region has a first direction different from a second direction of a second lattice image corresponding to the second crystal region, and

wherein lattices are continuously connected to each other at [a] said grain boundary of said semiconductor film.

57. (Previously Presented) A computer according to claim 56 further comprising an auxiliary capacitance.

 Applicant
 Shunpei Yamazaki et al.
 Attorncy's Docket No.: 07977-218003 / US3531/3615D1D1

Serial No.: 10/753,524 Filed: January 9, 2004

Page : 6 of 10

58. (Previously Presented) A computer according to claim 56 further comprising:

a pixel electrode;

an opposite electrode; and

a liquid crystal provided between said pixel electrode and said opposite electrode.

59. (Previously Presented) A computer according to claim 56 wherein channel length of

said channel formation region is 2 µm or shorter.

60. (Previously Presented) A computer according to claim 56 wherein direction of

movement of a carrier in said channel formation region coincides with direction of extension of

said grain boundary.

61. (Previously Presented) A computer according to claim 56 wherein the semiconductor

film comprises silicon.

62. (Previously Presented) A computer according to claim 56 wherein the semiconductor

film comprises a rod-shaped crystal.

63. (Previously Presented) A computer according to claim 56 wherein the semiconductor

film comprises a flattened rod-shaped crystal.

64. (Previously Presented) A computer according to claim 58 wherein the pixel electrode

comprises ITO.

65. (New) A personal computer according to claim 21 wherein said lattices are

continuously connected to each other at said grain boundary of said semiconductor film

according to high resolution TEM.

Applicant: Shunpei Yamazaki et al.

Serial No.: 10/753,524 Filed: January 9, 2004

Page : 7 of 10

66. (New) A personal computer according to claim 47 wherein said lattices are continuously connected to each other at said grain boundary of said semiconductor film according to high resolution TEM.

Attorney's Docket No.: 07977-

218003 / US3531/3615D1D1

- 67. (New) A personal computer according to claim 56 wherein said lattices are continuously connected to each other at said grain boundary of said semiconductor film according to high resolution TEM.
- 68. (New) A personal computer according to claim 21 wherein said substrate comprises a silicon wafer.
- 69. (New) A personal computer according to claim 47 wherein said substrate comprises a silicon wafer.
- 70. (New) A personal computer according to claim 56 wherein said substrate comprises a silicon wafer.